(a) a monoclonal antibody that cross competes with monoclonal antibody CP.B8 produced by hybridoma cell line ATCC No. HB-12107 for binding to gc chain, and also cross competes with Fab, $F(ab')_2$, and Fv fragments and conjugates of said CP.B8;

(b) a monoclonal antibody that cross competes with monoclonal antibody CQ.C11 produced by hybridoma cell line ATCC No. HB-12105 for binding to gc chain, and also cross competes with Fab, $F(ab')_2$, and Fv fragments and conjugates of said CQ.C11;

(c) a monoclonal antibody that cross competes with monoclonal antibody AF.F4 produced by hybridoma cell line ATCC No. HB-12104 for binding to gc chain, and cross competes Fab, $F(ab')_2$, and Fv fragments and conjugates of said AF.F4; and

(d) a monoclonal antibody that cross competes with the monoclonal antibody AE.C9 produced by hybridoma cell line ATCC No. HB-12106 for binding to gc chain, and cross competes with Fab, $F(ab')_2$, and Fv fragments and conjugates of said AE.C9.

REMARKS

Reconsideration and allowance are respectfully requested.

In the present application claims 1-58 are pending and claims 1-28 have been elected and are at issue. By the present amendment, claims 1-24 and 26-28 have been canceled. Claim 25 has been amended to spell out "gc chain" to read "common gamma chain" and to recite specific antibodies.

Claim Rejections – Statutory Double Patenting

Claims 6-9, 12-18, 20, 21, 22, 23 and 24 stand rejected under 35 USC § 101 statutory double patenting. The claims have been cancelled. Accordingly, Applicants submit that this rejection has been obviated and requests withdrawal of the rejection.

Claim Rejections – Non Statutory Double Patenting

Claims 1, 2, 5, 11, 21 and 25-28 stand rejected under the judicially created doctrine of obviousness-type double patenting. U.S. Patent No. 6,323,027B1 is commonly owned with the instant application. All claims have been cancelled except claim 25. Upon receipt of a Notice of Allowance Applicants will submit a terminal disclaimer.

Claim Rejections – 35 USC § 112

The Examiner has rejected claims 1-21 and 23-28 under 35 USC § 112, first paragraph.

Claims 1-21, 23-24 and 26-28 have been cancelled. Claim 25 has been amended. Accordingly, Applicants submit that this rejection has been obviated and request withdrawal of the rejection.

Claim Rejections – 35 USC § 102

The Examiner has rejected claims 1, 3-5 and 25-27 under 35 USC § 102(b).

Claims 1, 3-5 and 26-27 have been cancelled. Claim 25 has been amended. Accordingly, Applicants submit that this rejection has been obviated and request withdrawal of the rejection.

Objection to Oath or Declaration

In reference to the Examiner's claim that the oath or declaration is defective, Applicants hereby submit a corrected oath with this response. In compliance with 37 CFR 1.67(a), priority to PCT/US/97/07870 has been claimed under 35 U.S.C 120.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 02-2327**. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

If the Examiner believes that a telephone conference would expedite the prosecution of this application, please call the undersigned at (617)-679-2079.

Respectfully submitted,

Date: 3/14/03

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Version Showing Marked Up Changes

Please amend the specification as indicated:

On page 1, following the title please insert the following continuing data.

Related Applications:

This is a continuation of U.S.S.N. 09/189,129, filed on November 10, 1998, now issued U.S. patent 6,323,027B1, which is a continuation of PCT/US97/07870, filed May 9, 1997, which is a continuation-in-part application of U.S.S.N. 60/017,466 filed on May 10, 1996.

On page 6, lines 11-15:

The invention further embodies a series of continuous hybridoma cell line selected from the group consisting of ATCC No. HB-12107, ATCC No. HB-12105, ATCC No. HB-12104 and ATCC No. HB-12106 [and ATCC No._____], as well as specific anti human-gc monoclonal antibodies produced by these hybridoma cell lines and compositions of these monoclonal antibodies.

On page 6, lines 23-27:

Other compositions of the invention include a monoclonal antibody having complementary determining regions (CRDs) encoded by polynucleotide sequences selected from the group consisting of: (a) SEQ ID NOS: 5 and/or 6; (b) polynucleotides that hybridize to SEQ ID NOS: 5 an/or 6 under standard hybridization conditions; and [©] polynucleotides that encode a protein encoded by any of the foregoing polynucleotide sequences.

On page 11, lines 5-8:

FIG. 14 is a graph showing the effect of CP.B8 (open triangle and square) and its Fab fragment (open diamond) on the dose response curve for IL-4-dependent proliferation of PHA-activated T cells. Open [Closed] circles show the effect of isotype control MOPC 21 Ig and closed circles show the effect in the absence of mAb.

On page 55, lines 8-10:

Murine hybridoma cells and anti-gc antibodies useful in the present invention are exemplified by cultures deposited under the Budapest Treaty with the American Type Culture Collection

[Rockville, MD USA], 10801 University Boulevard, Manassas, VA 20110-2209 on 10 May1996 and identified as:

On pages 8-9, lines 24-2:

FIG. 2 is an array of four histograms showing immunofluorescent staining with anti-gc mAbs of L929 cells expression human gc chain. The relative cell number is plotted against the mean fluorescence intensity. Data for individual mAbs are plotted as solid lines, and data for the control MOPC21 Ig is plotted as indicated. FIG. 2[a]A. is the immunofluorescent staining of L929 gc chain transfectants with different anti-gc mAbs. FIG. 2[b]B is the staining of the L929 parent cells by the same antibodies. The remaining figures show staining with different anti-gc mAbs ith L929 gc chain transfectants (FIG. 2[c]C) and staining of L929 parent cells (FIG. 2[d]D).

On page 9, lines 3-8:

FIG. 3 is an array of two histograms showing immunofluorescent staining of PHA activated peripheral blood lymphocytes with anti-gc mAbs. The relative cell number is plotted against the mean fluorescence intensity. Data for individual mAbs are plotted as solid lines, and data for the MOPC 21 control Ig is plotted as indicated. FIG. 3[a]A shows immunofluorescent staining with one set of anti-gc mAbs and FIG. 3[b]B shows staining with different set of anti-gc mAbs.

On pages 10-11, lines 26-4:

FIG. 13 is a series of plots showing the effect of CP.B8 or anti-IL-4R alpha chain mAb on IL-4 dependent proliferation of PHA-activated T cells. The effect of CP.B8 on IL-4 dependent proliferation of PHA blasts is shown FIG. 13[a]A and the effect of mAb directed against the alpha chain of IL-4R is shown in FIG. 13[c]C. The effect of isotype-matched control Ig proteins MOPC21 and UPC10 is shown in FIG. 13[b]B. Open circles show the response in the absence of mAb or control Ig. Other symbols show response the effects of increasing concentrations of mAb up to a mAb concentration of 100 ug/ml (open squares with X marks are for CP.B8 and open circles with X marks are for anti-IL-4R alpha).

On page 11, lines 9-16:

FIG. 15 is a series of graphs showing the effect of various concentrations of CP.B8 (FIG. 15[a]A), anti-IL-4R alpha chain mAb (FIG. 15[b]B) or MOPC 21 (FIG. 15[c]C) on binding of radiolabelled IL-4 to PHA-activated PBLs. Filled circles show binding in the absence of mAb and open circles show the effects of increasing concentrations of mAb, in the order circles<squares<triangles<diamonds<inverted triangles, up to a mAb concentration of 100 ug/ml. CP.B8 does not block binding a high IL4 concentrations but may cause a modest decrease in the apparent affinity of binding. The expected competitive pattern of binding inhibition is shown in Panel B. The isotype control for the effect of CP.B8 has no effect (FIG. 15[c]C).

Amend claim 25 as indicated:

25. (Amended) A pharmaceutical composition which comprises a [gc-] gamma common chain blocking agent wherein the agent is a monoclonal antibody selected from the group consisting of:

(a) a monoclonal antibody that cross competes with monoclonal antibody CP.B8 produced by hybridoma cell line ATCC No. HB-12107 for binding to gc chain, and also cross competes with Fab, $F(ab')_2$, and Fv fragments and conjugates of said CP.B8;

(b) a monoclonal antibody that cross competes with monoclonal antibody CQ.C11 produced by hybridoma cell line ATCC No. HB-12105 for binding to gc chain, and also cross competes with Fab, $F(ab')_2$, and Fv fragments and conjugates of said CQ.C11;

(c) a monoclonal antibody that cross competes with monoclonal antibody AF.F4 produced by hybridoma cell line ATCC No. HB-12104 for binding to gc chain, and cross competes Fab, $F(ab')_2$, and Fv fragments and conjugates of said AF.F4; and

(d) a monoclonal antibody that cross competes with the monoclonal antibody AE.C9 produced by hybridoma cell line ATCC No. HB-12106 for binding to gc chain, and cross competes with Fab, $F(ab')_2$, and Fv fragments and conjugates of said AE.C9.